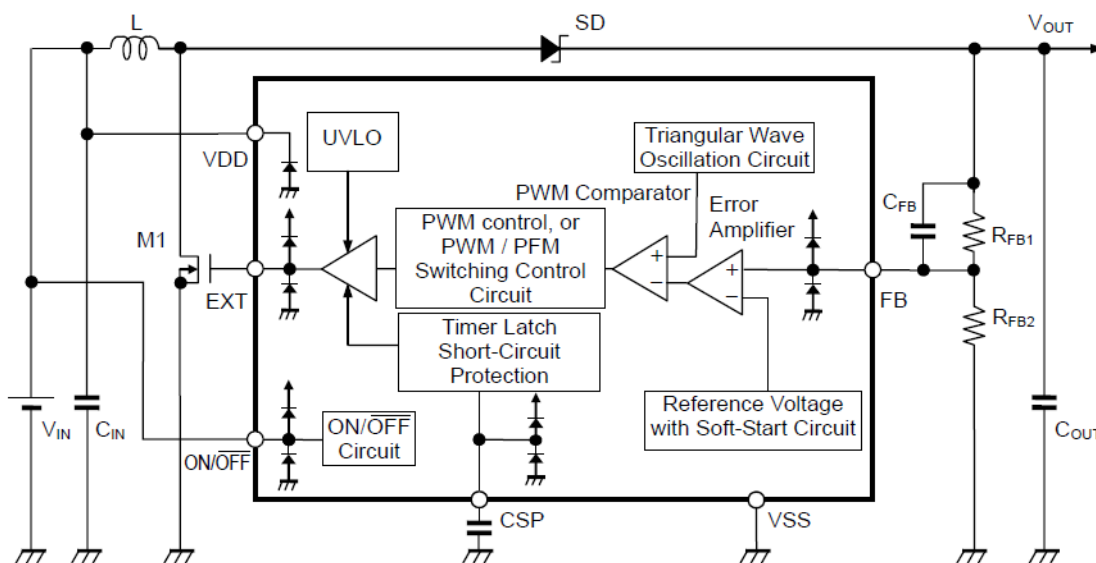


Press Release

Efficient PWM and PWM/PFM Step-Up Switching Regulator Controller with Protection Options

Two new switching regulator controller series S-8365 and S-8366 from Seiko Instruments offer high efficiency and optional protection circuitry against output short-circuit and Under-Voltage-Lock-Out (UVLO) to protect the feeding battery. When the supply voltage drops to a value detected as under-voltage the UVLO function will stop the regulator controller from switching and keep the external power FET in OFF-Mode. The built in soft start function is reset to prepare for the next start-up. This results in a reduction of supply current which can be further decreased to 1.0 μ A setting the ON/OFF input to OFF. Another option provides a delayed output short circuit protection that inhibits switching when the output is short circuited for a time which is preset by a capacitor connected to the CSP pin. This is performed by supervising the time in which the regulator is operating with maximum duty cycle and when delay is passed, switching is discontinued. Also in this mode supply current can be decreased to 1.0 μ A by setting the ON/OFF input to OFF, additionally this will reset the short circuit protection. The protection options save the battery, usually one Li-Ion battery-cell from overload and deep discharge. The input voltage range is from 1.8V to 5.5V, devices without UVLO are guaranteed to operate from 1.1V. Available oscillator frequencies are 600 KHz and 1.2 MHz. The duty cycle of the 600 KHz devices is 90% max. and 85% for the 1.2 MHz devices. The change over from PFM to PWM is set at 28% duty cycle. The soft-start-function stretches over typically 7ms. It takes only one inductor, one diode, one capacitor and one power FET to make a fully operable set-up. Both switching regulator controller series are available in small SOT-23-5 and SOT-23-6 packages, but still smaller is Seiko Instruments SNT-6A package with dimensions of only 1.8mm x 1.6mm x 0.5mm.

With UVLO function and short-circuit protection



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